Wave Interference Activity Instructions and Rubric
AP Physics
20 total points

1. On the top tab, click 'Light.' On the right side of the wave pattern, click 'Show Screen' and 'Intensity Graph.'
2. For one light, draw the intensity graph (1 point).
3. On the right side, click 'One Slit' to add a barrier. Draw the intensity graph for this case (1 point). Why does the intensity graph change from the one in question 2 (2 points)?
4. Move the barrier to one-quarter of the length from the left side of the simulation. Draw the intensity graph for this case (1 point). Is it different from the one in question 3 (1 point)? If so, how (2 points)?
5. Move the barrier to the middle of the simulation, and click 'Two Slits.' Draw the intensity graph for this case (1 point). How and why is this intensity graph created (2 points)?
6. Change the slit separation to 1750, and draw the intensity graph (1 point). How is this one different from the one in question 5 (2 points)?
7. Click 'Reset All' to reset the simulation. Click 'Two Lights' to add another light. Draw the intensity graph for this situation (1 point). Why does the intensity graph look the way it does (2 points)?
8. Change the light spacing to three-quarters from the left side of the simulation, and draw the intensity graph (1 point). How and why is this different from the one in question 7 (2 points)?